

LCN Fund Full Submission

Supplementary Answer Form

Tick if this answer is Confidential: ☐

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Project code:	UKPNT205	Question Number	UKPNT205 - 34
Question date	3 October 2013	Answer date	11 October 2013
Submission section question relates to	Expert panel bilateral		
Topic	Methodology		
Question	Please justify the focus of your sample. Did you consider examining a wider group, or do you consider that the proposed group is representative of fuel poor and vulnerable customers across GB?		
Notes on question			
Answer	<p>Consideration of examining a wider group</p> <p>In the design of the V-CEE sample the option of a wider group was considered. As stated at the second bilateral meeting, the partner, University College London (UCL) has conducted previous research of a similar sample size scale (~500 participants) in conjunction with the National Centre for Social Research (NatCen). Here, a stratified clustered random sample design was used. This required sampling 20 areas across England with 50 homes in each area. This ensured proper geographical coverage of England. In the context of the V-CEE project, it is clearly not feasible to replicate such a study design. To do so we would require installing network monitoring in 20 different geographical regions, as well as establishing engagement teams on the ground in these regions. Such a strategy would be prohibitively expensive. It is also not technically possible to replicate this study design because there is no sample frame from which to draw a properly representative sample of fuel poor. Also, for the reasons stated below regarding the similarities in the energy consumption of regular customers, priority services register customers, and customers from different ethnic backgrounds. In light of this, and the logistical constraints of requiring both network monitoring and engagement teams on the ground, it is felt that the target area in Tower Hamlets will provide data that is generalisable with respect to energy saving and shifting. In addition, learning's on how to design and conduct effective engagement strategies will be transferable to other fuel poor customer clusters within the UK.</p>		

Transferability of findings

We recognise that the Expert Panel had concerns about the transferability of findings. There were two concerns:

- Transferability of energy savings and shifting
- Transferability of engagement

Transferability of energy savings and shifting

As stated at the second bilateral with the Expert Panel, the findings on energy reduction and energy shifting will be generalisable to the fuel poor outside of the trial areas.

Analysis of the differences in energy consumption between people on the priority services register and regular customers, and people from different ethnic backgrounds and regular customers, show that there is little difference in the energy consumption of these groups. The differences of around 5% in the mean between these groups represent differences of around 200 kWh/year. These need to be viewed in the context of the standard deviations of these groups that are around 2000 kWh/year, thus the differences in mean between are on only 0.1 of one standard deviation of the groups. Thus fuel poverty, and ethnicity explain very little of the observed variation in energy consumption. Because of this, we think that the findings in terms of energy savings and energy shifting will be generalisable to the fuel poor outside of the trial areas.

Because this information is transferable, the findings from the statistical analysis of the half-hourly smart meter data, and the construction of network models, will also be transferable. Thus we will be able to transfer the findings on the following to other fuel poor customers:

Statistical analysis of half-hourly energy data.

- Daily average demand reduction (weekdays and weekends) by customer type and month adjusted for inter-annual weather and seasonality.
- Daily average peak reduction (weekdays and weekends) by customer type and month adjusted for inter-annual weather and seasonality.
- Reduction in Diversity Factors for individuals and at different points in the topology of the network where network monitoring is installed.
- Cluster analysis (Ward's Euclidian distance measure) of the profiles to see if they cluster differently pre- and post- tariff.

Network modelling (See 'DEAM' Dynamic Energy Agents Model) of the energy demands of households connected to a local electricity substation.

- Empirically grounded half-hourly load curves for substations.
- Estimates of load at distribution substations for each half hour for a set of representative day types for future years (up to 2050).

Transferability of engagement

Secondly, as stated at the second bilateral with the Expert Panel, the

	<p>findings as to how to design an engagement strategy for fuel poor customers will be transferable outside of the trial.</p> <p>The specific design of the engagement strategy within the trial area, we would not expect to be transferable, as each engagement strategy needs to be adapted to the specifics of a given geographical area. For example, within the Tower Hamlets area, we would expect Bromley by Bow Community Centre, to emerge as a significant trusted entity for the communication of energy saving and energy shifting information to participants. This, of course, would not transfer to other areas, but the mechanisms for identifying the appropriate local organisations to engage with will be transferable. Thus we will be able to transfer the findings on the following to the design of engagement strategies in other areas with clusters of fuel poor customers:</p> <p><i>Individuals learn about energy through three media types and these characteristics will be related to the trial participants aspects of energy saving and energy shifting:</i></p> <ul style="list-style-type: none"> - Personal contacts (energy social capital) - What they read (media messages) - Professional Organisations (who delivers the message - utilities, social housing landlords, etc.) <p>For every community each of these matter, but specific actors and the balance change. We will be able to share the mechanism employed by the project to identify each of these and how they influenced the engagement strategy. Also through qualitative interviews or focus groups in V-CEE we will gather data on 'what has worked and why' of the energy savings and shifting technologies and engagement strategies.</p>
Attachments	
Verbal Clarifications (Consultants)	